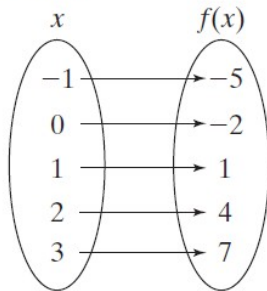


Algebra Quick Quiz 02212025

Question 1.

One way to represent a function  $f(x)$  is to use a mapping diagram like the one below.



Which of the following is NOT another correct way to represent  $f(x)$ ?

- A**  $x$  is every integer between  $-1$  and  $3$  and  $f(x) = 3x - 2$ .
- B**  $f(x) = \{(-1, -5), (0, -2), (1, 1), (2, 4), (3, 7)\}$
- C**  $f(x) = 3x + 2$  and the domain is  $\{-1, 0, 1, 2, 3\}$ .
- D** The range is  $\{-5, -2, 1, 4, 7\}$  and  $f(x) = 3x - 2$ .

Question 2

Find the range for the function rule  $y = 3x + 4$  for the domain  $\{-3, -2, -1, 2\}$ .

- A**  $\{-3, -2, 4, 6\}$       **C**  $\{-5, 10, 2, 1\}$
- B**  $\{5, 10, 12, 16\}$       **D**  $\{-5, -2, 1, 10\}$

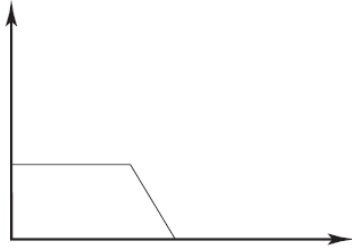
Question 3.

Find  $f(-2)$  given  $f(x) = x^2 - 3x + 4$ .

- A** 4      **C** 14
- B** 6      **D** 16

Question 4.

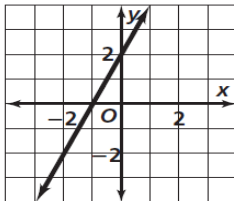
Which of the following is most likely represented by this graph?



- A** a lawn mower that runs out of gas
- B** the outdoor temperature on a hot day as it approaches noon
- C** your speed as you jog and then go up a steep hill
- D** the weight of a turtle

Question 5.

Which table of values was used to make the following graph?



- A**

$x$	$-3$	$-1$	$0$	$1$
$y$	$-2$	$-1$	$2$	$4$
- B**

$x$	$-3$	$-2$	$0$	$1$
$y$	$4$	$2$	$2$	$4$
- C**

$x$	$-3$	$-1$	$0$	$1$
$y$	$-4$	$0$	$2$	$4$
- D**

$x$	$-3$	$-2$	$0$	$1$
$y$	$-3$	$-2$	$2$	$4$

Question 6.

Which situation could the equation  $y = 20x + 80$  represent?

- A You bought a CD player for \$80 and then bought \$20 worth of CDs.
- B You have paid \$20 toward a new television and plan to pay \$80 more each month.
- C You received 2 gift certificates for \$20 for your birthday and already had saved \$80 worth of gift certificates.
- D You have saved \$80 and add \$20 to your savings each month.

Question 7.

Which of the following tables can be generated by  $y = x^2 + 2$ ?

**A**

$x$	$y$
-1	1
0	2
1	3
2	4

**C**

$x$	$y$
2	4
0	2
-1	2
-2	8

**B**

$x$	$y$
-2	0
-1	1
0	2
1	3

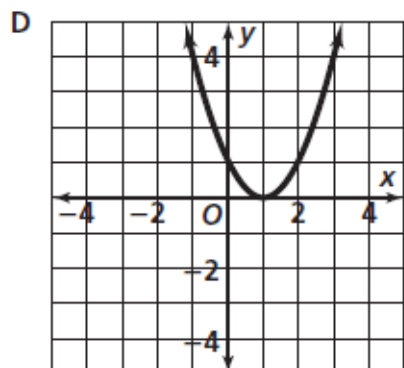
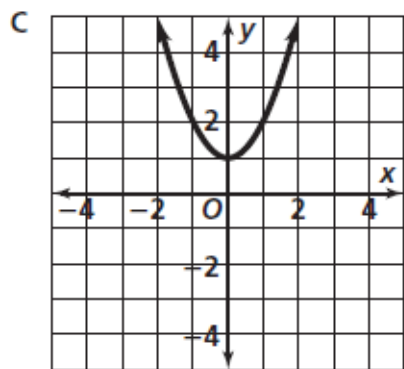
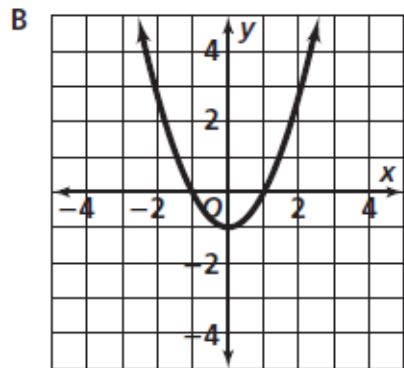
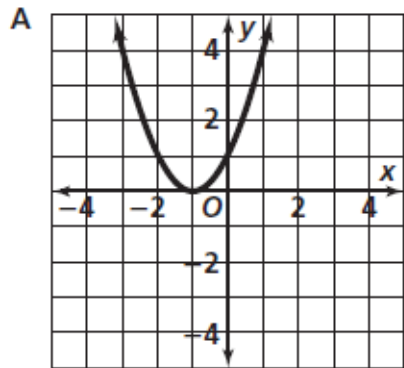
**D**

$x$	$y$
-1	3
0	2
1	3
2	6

Question 8.

Try to reason this out without the use of graphing software. I trust you to be honest.

Which of the following is the graph of  $y = x^2 - 1$ ?



Question 9.

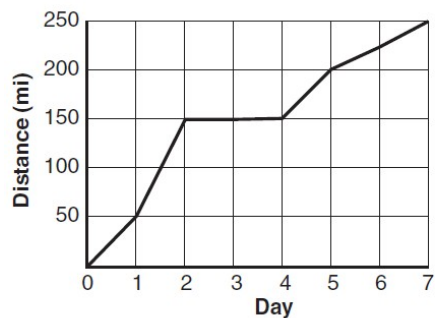
Which of the following is the function rule for the table shown below?

$c$	$G(c)$
-2	17
-1	5
0	1
1	5
2	17

- A  $G(c) = c + 19$
- B  $G(c) = c^2 + 13$
- C  $G(c) = c^4 + 1$
- D  $G(c) = 4c^2 + 1$

Question 10.

The graph shows the cumulative distance Yolanda traveled on her week-long bicycle trip.



Which best describes what happened during Days 2-4?

- A Yolanda rode downhill.
- B Yolanda rode on a flat place.
- C Yolanda took a break from riding.
- D Yolanda rode 150 miles each of those days.

## Bonus Question

### Question 11

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#### Part A

At a clothing store, Ted bought 4 shirts and 2 ties for a total price of \$95. At the same store, Stephen bought 3 shirts and 3 ties for a total price of \$84. Each shirt was the same price, and each tie was the same price. Which system of equations can be used to find  $s$ , the cost of each shirt in dollars, and  $t$ , the cost of each tie in dollars?

- A. 
$$\begin{cases} 6(s + t) = 95 \\ 3(s + t) = 84 \end{cases}$$
- B. 
$$\begin{cases} 4s + 2t = 95 \\ 3s + 3t = 84 \end{cases}$$
- C. 
$$\begin{cases} 7s + 5t = 179 \\ s + t = 12 \end{cases}$$
- D. 
$$\begin{cases} 7s + 5t = 179 \\ 7s + 5t = 12(s + t) \end{cases}$$

#### Part B

Linda bought 1 shirt and 2 ties at the same store. What is the total price, in dollars and cents, of Linda's purchase?

Enter your answer in the box.